

REMARKS:

Claims 1-14, 43, and 44 are currently pending in the subject Application.

Claims 15-42 are have been previously canceled without *prejudice*.

Claims 1-14, 43, and 44 stand rejected under 35 U.S.C. § 101.

Claims 1-14, 43, and 44 stand rejected under 35 U.S.C. § 112, second paragraph.

Claims 1-14, 43, and 44 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,151,582 to Huang et al. (hereinafter “*Huang*”) in view of U.S. Patent No. 5,826,236 to Narimatsu et al. (hereinafter “*Narimatsu*”).

Applicants respectfully submit that all of Applicants arguments and amendments are without *prejudice* or *disclaimer*. In addition, Applicants have merely discussed example distinctions from the cited prior art. Other distinctions may exist, and as such, Applicants reserve the right to discuss these additional distinctions in a future Response or on Appeal, if appropriate. Applicants further respectfully submit that by not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are considered sufficient to overcome the Examiner's rejections. In addition, Applicants reserve the right to pursue broader claims in this Application or through a continuation patent application. No new matter has been added.

I. Rejections Under 35 U.S.C. § 101

Claims 1-14 and 43-44 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. While Applicants submit that these claims in their prior, unamended form are in fact directed toward statutory subject matter, to expedite prosecution and timely issuance of the claims contained in the subject application, Applicants have amended independent Claims 1, 43, and 44 to more clearly reflect that Applicants’ invention is directed

toward statutory subject matter. Accordingly, Applicants respectfully request that the Examiner's rejections under 35 U.S.C. § 101 be withdrawn.

II. Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 1-14, 43, and 44 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully disagree.

Nonetheless, Applicants have amended independent Claims 1, 43, and 44 to expedite prosecution of this Application and to more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. By making these amendments, Applicants do not indicate agreement with or acquiescence to the Examiner's position with respect to the rejections of these claims under 35 U.S.C. § 112, as set forth in the Office Action. Particularly, Applicants reserve the right to file additional claims in this Application or through a continuation patent application of substantially the same scope of originally filed Claims 1-14, 43, and 44.

Applicants respectfully submit that independent Claims 1, 43, and 44 are considered to be in full compliance with the requirements of 35 U.S.C. § 112. Applicants further respectfully submit that independent Claims 1, 43, and 44 are in condition for allowance. With respect to dependent Claims 2-14, these claims depend from amended independent Claim 1. As mentioned above, independent Claim 1 is considered to be in full compliance with the requirements of 35 U.S.C. § 112. Thus, dependent Claims 2-14 are considered to be in condition for allowance for at least the reason of depending from an allowable claim. Thus, Applicants respectfully request that the rejection of Claims 1-14, 43, and 44 under 35 U.S.C. § 112 be reconsidered and that Claims 1-14, 43, and 44 be allowed.

III. Rejection Under 35 U.S.C. § 103(a)

Claims 1-14, 43, and 44 stand rejected under 35 U.S.C. § 103(a) over *Huang* in view of *Narimatsu*.

Applicants respectfully submit that the proposed combination of *Huang* and *Narimatsu* fails to disclose each and every limitation recited by Claims 1-14, 43, and 44. Applicants further respectfully submit that Claims 1-14, 43, and 44 patentably distinguish over the proposed combination of *Huang* and *Narimatsu*, either individually or in combination. Thus, Applicants respectfully traverse the Examiner's obviousness rejection of Claims 1-14, 43, and 44 under 35 U.S.C. § 103(a) over the proposed combination of *Huang* and *Narimatsu*, either individually or in combination.

In rejecting Claim 1, the Examiner states the following:

With respect to **claims 1**, Huang teaches a server configured to:

- a. access a forecasted demand for a specified quantity of serviceable parts at a specified future time at a repair location;
- b. plan a move order for moving the part between the repair location and the upstream repair location such that the part can be available for repair at the upstream repair location at the estimated earliest time, the move order having a start time and a delivery time (Figure 9, column/line 14/26-37, 17/9-11, 98/54-59, abstract);
- c. plan a repair order for the part at the upstream repair location at the estimated latest time, the repair order having a start time; in a third phase, for each of the one or more inspected unserviceable parts at the repair location that are not repairable at the repair location (Figure 9, column/line 14/26-37, 17/9-11);

(6 May 2009 Non-Final Office Action, page 8). Applicants respectfully disagree with all of the above and direct the Examiner's attention to Figure 9, column 14, lines 26-37 and column 17, lines 9-11 of the specification of *Huang*, provided below, on which the Examiner relies:

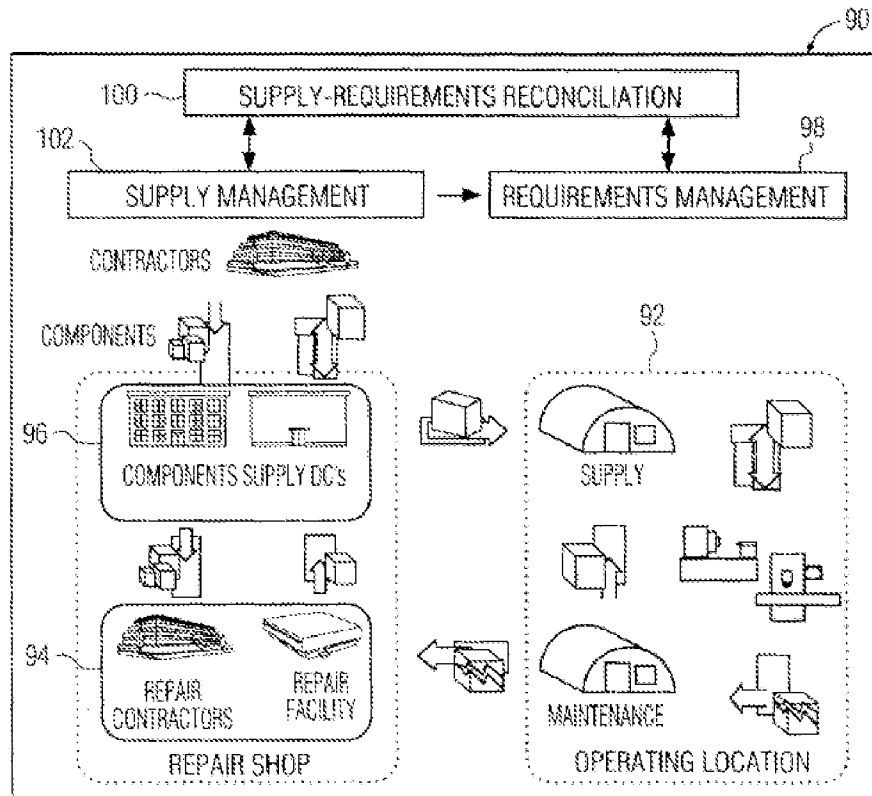


FIG. 9

The equipment repair supply chain **90**, as depicted in FIG. 9, includes the operating location **92**, i.e., the point-of-use, the repair shop **94**, and the component suppliers **96**. In an equipment repair supply chain, the demand (or the "requirements") are generated by equipment failures. When equipment fails, the failed module is replaced from the stock at the operating location **92**, and the failed module is eventually sent to the repair shop **94** for repair. A module is made up of repair items which in turn are made up of components. At the repair shop **94**, the repair is carried out by the repair resources (people and machinery). During the repair process at the repair shop **94**, certain repair items and components are replaced. Based on the repair needs, repair items and components will be ordered from the sources of supply by the repair shops.

The second process is the Requirements-Supply Reconciliation Planning process **100** that aims at developing an integrated repair plan for the repair shop through a reconciliation process. First, the type and parameters of the repair policy of the repair shop are to be determined. Aggregate repair requirements are generated based on the repair policy of the repair shop and estimated consolidated

requirements for all facilities. The next step is to generate an aggregate repair plan based on repair time estimates for each repairable part and the aggregate repair requirements. Feasibility of the aggregate repair plan is checked with respect to resource constraints which are repair resource capacities and key component availability. If the aggregate repair plan is not feasible with respect to resource constraints, then causes for infeasibility are identified and the infeasibility is removed by either changing the level of the resource constraints or moving aggregate requirements forward or backward in time. This procedure is repeated until an aggregate repair plan that is feasible with respect to resource constraints is attained.

Applicants respectfully submit that as shown above, *Huang* fails to disclose at least the limitations of Claim 1 of “in a ***first phase***, for each of one or more inspected unserviceable parts at the repair location that are not repairable at the repair location...plan a move order for moving the part between the repair location and the upstream repair location ***such that the part can be available for repair at the upstream repair location at the estimated earliest time, the move order having a start time and a delivery time.***” By contrast, the portions of *Huang* on which the Examiner relies to disclose these elements merely disclose a general “Requirements-Supply Reconciliation Planning process” that generates an “aggregate repair plan” and performs feasibility analysis to determine if “resource constraints” render the aggregate repair plan infeasible. *Huang* is silent and thus, fails to disclose “in a ***first phase***, for each of one or more inspected unserviceable parts at the repair location that are not repairable at the repair location...plan a move order for moving the part between the repair location and the upstream repair location ***such that the part can be available for repair at the upstream repair location at the estimated earliest time, the move order having a start time and a delivery time,***” as required by Claim 1.

In rejecting Claim 1, the Examiner further states the following:

Huang does not teach the estimation of the earliest and latest time to begin repairs. However, Narimatsu teaches the method:

- e. estimate the earliest time at which an operation can begin for a part at an upstream location (column/line 16/49-52); and
- f. estimate a latest time at which an operation can begin with respect to the part at the upstream location in order to help satisfy the forecasted demand at the location (column/line 16-49-52).

(6 May 2009 Non-Final Office Action, page 9). Applicants thank the Examiner for noting that *Huang* fails to disclose “*estimat[ing] the earliest time at which a repair operation can begin for the part at an upstream repair location*” and “*according to the forecasted demand and the earliest time estimated in the first phase, estimat[ing] a latest time at which a repair operation can begin with respect to the part at the upstream repair location in order to help satisfy the forecasted demand at the repair location,*” as required by Claim 1. However, Applicants respectfully disagree with the Examiner’s assertion that *Narimatsu* discloses these limitations and direct the Examiner’s attention to column 16, lines 23-56 of the specification of *Narimatsu*, provided below, on which the Examiner relies:

In addition to various types of data described above, the schedule data 5c also includes data F, shown in Table 6, for use in internal calculation for scheduling.

TABLE 6

ED name	EST	EET	LST	LET	RS	START	END
11-1-1	3/28	3/28	3/28	3/28	NONE	----	----
11-1-2	3/28	3/28	3/28	3/28	NONE	----	----
11-1-3	3/28	3/28	3/28	3/28	NONE	----	----
11-1-4	3/28	3/28	3/28	3/28	NONE	----	----
11-2-1	3/28	3/28	3/28	3/28	NONE	----	----
.							
.							
22-3-4	3/28	3/28	3/28	3/28	NONE	----	----
23-1-1	3/28	3/28	3/28	3/28	NONE	----	----
23-1-2	3/28	3/28	3/28	3/28	NONE	----	----
23-1-3	3/28	3/28	3/28	3/28	NONE	----	----
23-1-4	3/28	3/28	3/28	3/28	NONE	----	----
Model 3	3/28	3/28	3/28	3/28	----	----	----
Model 1	3/28	3/28	3/28	3/28	----	----	----

At the start of scheduling, the standard manpower table, which is stored as data A, is expanded into data F. In table 6, the column "RS" contains resource data, and "NONE" in that column means that the resource is not yet allocated. The date 3/28, the start time of the above-described schedule time, is set as the initial value. The columns "EST", "EET", "LST", and "LET" contain the results of PERT calculation, meaning the earliest start time, earliest end time, latest start time, and latest end time, respectively. In the PERT calculation, this embodiment uses the standard manpower time as the work time. The column "START" contains the start time of actual allocation, and the column "END" contains the end time of actual allocation.

Applicants respectfully submit that the portion of *Narimatsu* relied upon by the Examiner merely discloses, among other things, a table containing data that is used in production scheduling

for manufacturing items, particularly the resulting values from a Program Evaluation and Review Technique (PERT) calculation. The PERT calculation as disclosed in the example detailed in *Narimatsu* above centers around a standard manpower time that serves as a proxy for the amount of time needed to manufacture an item. While *Narimatsu* does in fact mention the terms “earliest start time” and “latest start time” as well as make an estimate for the length of time needed to complete the manufacturing process, nowhere does the portion of *Narimatsu* relied upon by the Examiner make an estimate of the “earliest time *at which a repair operation can begin for the part at an upstream repair location*” or an estimate of a “latest time *at which a repair operation can begin with respect to the part at the upstream repair location in order to help satisfy the forecasted demand at the repair location*” “according to the forecasted demand and the earliest time estimated in the first phase,” as required by Claim 1.

Furthermore, neither *Huang* nor *Narimatsu* discloses, nor does the Examiner even allege that either of these references discloses a discrete “first phase,” “second phase” and “third phase” during which requisite elements of a repair process are accomplished in accordance with Applicants’ Claim 1. Therefore, as discussed in detail above, neither *Huang* nor *Narimatsu*, taken individually or in combination render Claim 1 obvious. Accordingly, Applicants respectfully request that the Examiner’s rejections under 35 U.S.C. § 103(a) be withdrawn.

IV. The Office Action Fails to Properly Establish a *Prima Facie* case of Obviousness over the Proposed *Huang-Narimatsu* Combination According to the UPSTO Examination Guidelines

Applicants respectfully submit that the Office Action fails to properly establish a *prima facie* case of obviousness based on the proposed combination of *Huang* or *Narimatsu*, either individually or in combination, and in particular, the Office Action fails to establish a *prima facie* case of obviousness based on the “Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*” (the “Guidelines”).

As reiterated by the Supreme Court in *KSR International Co. v. Teleflex Inc.* (*KSR*), the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966)). Obviousness is a question of law

based on underlying factual inquiries. These factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;
- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art.

(Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)). Objective evidence relevant to the issue of obviousness must be evaluated by Office personnel. (383 U.S. 17–18, 148 USPQ 467 (1966)). As stated by the Supreme Court in *KSR*, “While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.” (*KSR*, 550 U.S. at ___, 82 USPQ2d at 1391).

However, it is important to note that the Guidelines require that Office personnel “***ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied.***” (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)). In addition, the Guidelines remind Office personnel that the “***factual findings made by Office personnel are the necessary underpinnings to establish obviousness.***” (*id.*). Further, “***Office personnel must provide an explanation to support an obviousness rejection*** under 35 U.S.C. 103. (*id.*). In fact, “35 U.S.C. 132 requires that the applicant be notified of the reasons for the rejection of the claim so that he or she can decide how best to proceed” and “clearly setting forth findings of fact and the rationale(s) to support a rejection in an Office action leads to the prompt resolution of issues pertinent to patentability.” (*id.*).

With respect to the subject application, the Office Action has not shown the ***factual findings necessary to establish obviousness*** or even ***an explanation to support the obviousness rejection*** based on the proposed combination of *Huang* and *Narimatsu*. The Office Action merely states that “it would have been obvious to one of ordinary skill in the art to include the business system of *Huang* with the ability to explicitly estimate the earliest and latest times to begin repairs as taught by *Narimatsu*” (6 May 2009 Non-Final Office Action, page 9). Applicants respectfully disagree and respectfully submit that the Examiner’s conclusory statement is not sufficient to establish the ***factual findings necessary to establish obviousness*** and is not a sufficient ***explanation to support the obviousness rejection*** based on the proposed combination of *Huang* and *Narimatsu*. ***Applicants***

respectfully request that the Examiner provide proper support for the obviousness rejection under 35 U.S.C. 103 as necessitated by the Guidelines, including the factual findings necessary to establish obviousness to “ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied.” (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)).

The Guidelines further provide guidance to Office personnel in “determining the scope and content of the prior art” such as, for example, “Office personnel must first obtain a thorough understanding of the invention disclosed and claimed in the application.” (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)). The scope of the claimed invention must be clearly determined by giving the claims the “broadest reasonable interpretation consistent with the specification.” (See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) and MPEP § 2111.). In addition, the Guidelines state that any “**obviousness rejection should include**, either explicitly or implicitly in view of the prior art applied, **an indication of the level of ordinary skill.**” (Notice, 72 Fed. Reg. 57528 (Oct. 10, 2007)). With respect to the subject Application, the Office Action has not provided **an indication of the level of ordinary skill**. *Applicants respectfully request that the Examiner provide proper support for the obviousness rejection under 35 U.S.C. 103 as necessitated by the Guidelines, including an indication of the level of ordinary skill, relied upon by the Examiner.* (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)).

The Guidelines still further provide that once the *Graham* factual inquiries are resolved, Office personnel must determine whether the claimed invention would have been obvious to one of ordinary skill in the art. (*Id.*). For example, the Guidelines state that **Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.** (*Id.*). In addition, the Guidelines state that the proper analysis is **whether the claimed invention would have been obvious to one of ordinary skill in the art after consideration of all the facts.** (*Id.* and See 35 U.S.C. 103(a)).

With respect to the subject Application, the Office Action has not expressly resolved any of the *Graham* factual inquiries to determine whether Applicants invention would have been obvious to one of ordinary skill in the art. In addition, the Office Action fails to **explain why the difference(s) between the proposed combination of Huang, Narimatsu, and Applicants claimed**

invention would have been obvious to one of ordinary skill in the art. The Office Action merely states that “the claimed invention is merely a combination of old elements, and in the combination each element is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately.” (6 May 2009 Non-Final Office Action, page 9). Applicants respectfully disagree and further respectfully request clarification as to how this statement *explains why the difference(s) between the proposed combination of Huang, Narimatsu, and Applicants claimed invention would have been obvious to one of ordinary skill in the art.* Applicants further respectfully submit that the Examiner is using the subject Application as a template to formulate reconstructive hindsight, which constitutes impermissible use of hindsight under 35 U.S.C. § 103(a).

The Guidelines yet further state that the “key to supporting any rejection under 35 U.S.C. 103 is the *clear articulation of the reason(s) why the claimed invention would have been obvious.*” (Notice, 72 Fed. Reg. 57528 (Oct. 10, 2007)). In fact, the Supreme Court in *KSR* noted that “*the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.*” (*id.*). The Court quoting *In re Kahn* (441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)), stated that “[R]ejections on *obviousness cannot be sustained by mere conclusory statements*; instead, there *must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.*” (*KSR*, 550 U.S. at ___, 82 USPQ2d at 1396). The Guidelines provide the following seven rationales:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Applicants respectfully submit that the *Office Action fails to provide any articulation, let alone, clear articulation of the reasons why Applicants claimed invention would have been obvious*. For example, the *Examiner has not adequately supported the selection and combination of Huang and Narimatsu to render obvious Applicants claimed invention*. The Examiner's unsupported conclusory statements that:

It would have been obvious to one of ordinary skill in the art to include the business system of Huang with the ability to explicitly estimate the earliest and latest times to begin repairs as taught by Narimatsu since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

does not adequately provide clear articulation of the reasons why Applicants claimed invention would have been obvious. (6 May 2009 Non-Final Office Action, page 9). In addition, the Examiner's unsupported conclusory statement fails to meet any of the Guidelines rationales to render obvious Applicants claimed invention.

Thus, if the Examiner continues to maintain the obviousness rejection based on the proposed combination of *Huang* and *Narimatsu*, *Applicants respectfully request that the Examiner provide proper support for the obviousness rejection under 35 U.S.C. 103 as necessitated by the Guidelines, including an explicit analysis of the rationale relied upon by the Examiner*.

V. Applicants Claims are Patentable over the Proposed Huang-Narimatsu Combination

Applicants respectfully submit that independent Claim 1 is considered patentably distinguishable over the proposed combination of *Huang* and *Narimatsu*. This being the case, independent Claims 43 and 44 are also considered patentably distinguishable over the proposed combination of *Huang* and *Narimatsu*, for at least the reasons discussed above in connection with independent Claim 1.

Furthermore dependent Claims 2-14 depend from independent Claim 1 and are considered patentably distinguishable over the proposed combination of *Huang* and *Narimatsu*. Thus, dependent Claims 2-14 are considered to be in condition for allowance for at least the reason of depending from an allowable claim.

For at least the reasons set forth herein, Applicants respectfully submit that Claims 1-14, 43, and 44 are not rendered obvious by the proposed combination of *Huang* and *Narimatsu*. Applicants further respectfully submit that Claims 1-14, 43, and 44 are in condition for allowance. Thus, Applicants respectfully request that the rejection of Claims 1-14, 43, and 44 under 35 U.S.C. § 103(a) be reconsidered and that Claims 1-14, 43, and 44 be allowed.

CONCLUSION:

In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and early reconsideration and a Notice of Allowance are earnestly solicited.

Although Applicants believe no fees are deemed to be necessary; the undersigned hereby authorizes the Director to charge any additional fees which may be required, or credit any overpayments, to **Deposit Account No. 500777**. If an extension of time is necessary for allowing this Response to be timely filed, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) to the extent necessary. Any fee required for such Petition for Extension of Time should be charged to **Deposit Account No. 500777**.

Please link this application to Customer No. 53184 so that its status may be checked via the PAIR System.

Respectfully submitted,

6 August 2009
Date

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